

## Product datasheet

# Anti-Podoplanin antibody [18H5] - BSA and Azide free ab10288

★★★★★ [7 Abreviews](#) [41 References](#) [7 Images](#)

### Overview

<b>Product name</b>	Anti-Podoplanin antibody [18H5] - BSA and Azide free
<b>Description</b>	Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Full length protein corresponding to Podoplanin. MDCK cells stably expressing Podoplanin protein. Database link: <a href="#">Q86YL7</a>
<b>Positive control</b>	WB: human lymphatic endothelial cells, human placenta and skeletal muscle tissue lysates. ICC/IF: human dermal lymphatic endothelial Flow Cyt: HCT 116 (Human colorectal carcinoma cell line) whole cell lysate,
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein G purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	18H5

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab10288 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (1)	Use a concentration of 1 - 2 µg/ml.
WB	★★★★★ (1)	Use a concentration of 5 µg/ml. Detects a band of approximately 35 kDa (predicted molecular weight: 24 kDa).
Flow Cyt		Use 1 µl for 10 <sup>6</sup> cells. (methanol fixed cells)

## Target

### Function

May be involved in cell migration and/or actin cytoskeleton organization. When expressed in keratinocytes, induces changes in cell morphology with transfected cells showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion. Required for normal lung cell proliferation and alveolus formation at birth. Induces platelet aggregation. Does not have any effect on folic acid or amino acid transport. Does not function as a water channel or as a regulator of aquaporin-type water channels.

### Tissue specificity

Highly expressed in placenta, lung, skeletal muscle and brain. Weakly expressed in brain, kidney and liver. In placenta, expressed on the apical plasma membrane of endothelium. In lung, expressed in alveolar epithelium. Up-regulated in colorectal tumors and expressed in 25% of early oral squamous cell carcinomas.

### Sequence similarities

Belongs to the podoplanin family.

### Post-translational modifications

Extensively O-glycosylated. Contains sialic acid residues. O-glycosylation is necessary for platelet aggregation activity.  
The N-terminus is blocked.

### Cellular localization

Membrane. Cell projection > filopodium membrane. Cell projection > lamellipodium membrane. Cell projection > microvillus membrane. Cell projection > ruffle membrane. Localized to actin-rich microvilli and plasma membrane projections such as filopodia, lamellipodia and ruffles.

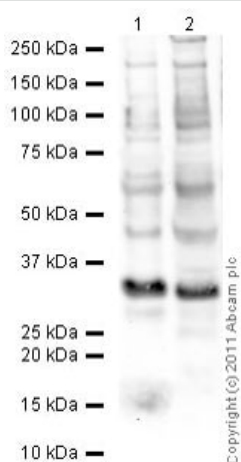
## Images



Immunocytochemistry/ Immunofluorescence -  
Mouse monoclonal [18H5] to Podoplanin - BSA and  
Azide free (ab10288)

ab10288 at a 1/500 dilution staining human dermal lymphatic endothelial by Immunocytochemistry. The cells were grown in coverslips and fixed in formalin prior to permeabilization with tritonX-100. The cells were incubated with the primary antibody at 1/500 for 1 hour and then bound antibody was detected using a biotinylated goat anti-mouse antibody. Texas red-streptavidin was used for development.

This image is courtesy of an Abreview submitted by **Maria Navarro**.



Western blot - Mouse monoclonal [18H5] to  
Podoplanin - BSA and Azide free (ab10288)

**All lanes :** Anti-Podoplanin antibody [18H5] - BSA and Azide free (ab10288) at 5 µg/ml

**Lane 1 :** Human placenta tissue lysate - total protein (**ab29745**)

**Lane 2 :** Human skeletal muscle tissue lysate - total protein (**ab29330**)

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Mouse IgG H&L (HRP) preadsorbed (**ab97040**) at 1/5000 dilution

Developed using the ECL technique.

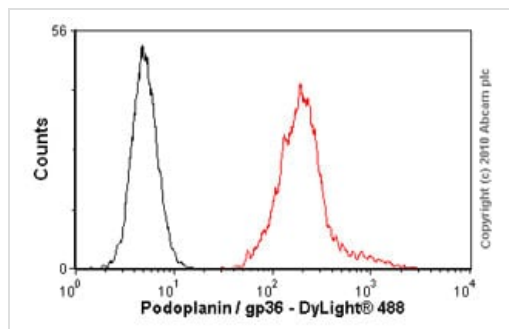
Performed under reducing conditions.

**Predicted band size:** 24 kDa

**Observed band size:** 35 kDa

**Exposure time:** 20 minutes

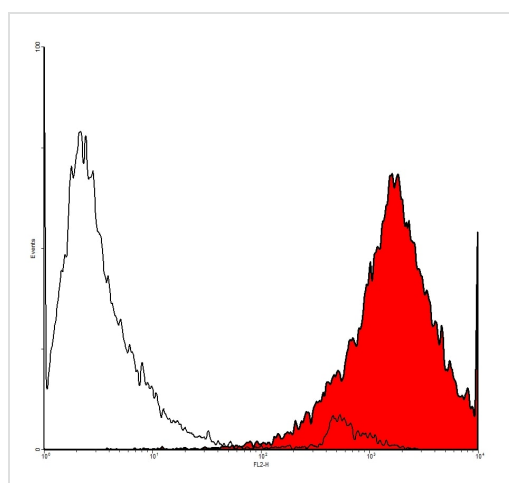
Podoplanin protein is extensively glycosylated. This might explain the observation of a band at a higher molecular weight than predicted.



Flow Cytometry - Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free (ab10288)

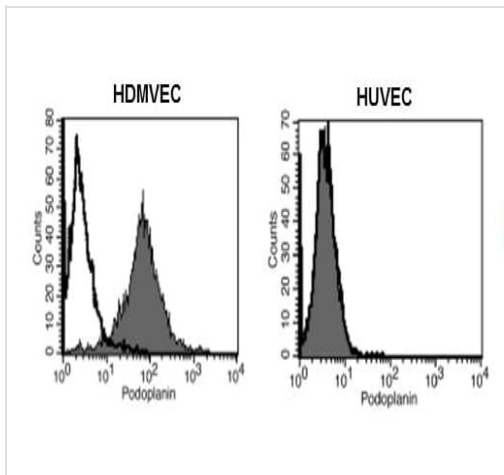
Overlay histogram showing HCT116 cells stained with ab10288 (red line). The cells were fixed with methanol (5 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab10288, 1 µg/1x10<sup>6</sup> 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](#), 2 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a slightly decreased signal in HCT116 cells fixed with 4% paraformaldehyde (10 min) used under the same conditions.

Please note that Abcam does not have data for use of this antibody on non-fixed cells. We welcome any customer feedback.



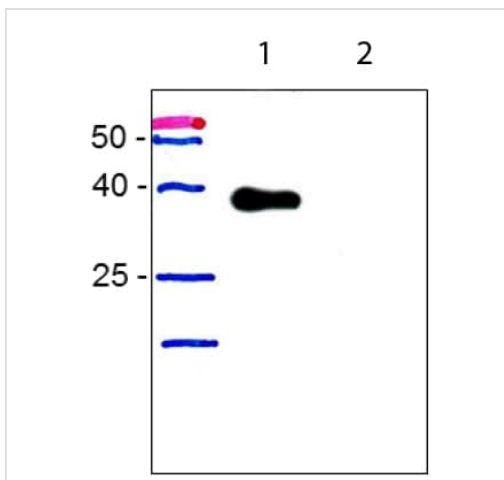
Flow Cytometry - Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free (ab10288)

Flow cytometric analysis of human primary lymphatic endothelial cells (HDLEC) labeling Podoplanin with ab10288 at 5 µg/mL. Anti-mouse IgG-PE was used as a secondary antibody.



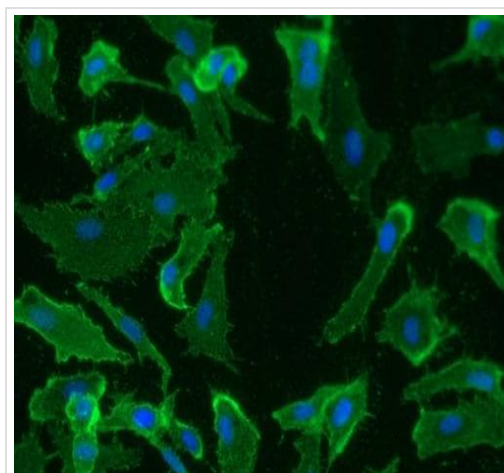
Flow Cytometry - Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free (ab10288)

Flow cytometric analysis of primary human dermal microvascular (HDMVEC) and umbilical vein (HUVEC) endothelial cells labeling Podoplanin with ab10288 at 5 µg/mL. The lymphatic endothelial cell marker Podoplanin is not expressed in the blood endothelial cells.



Western blot - Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free (ab10288)

Western blot analysis of Podoplanin expression in human lymphatic endothelial cells (LEC) - lane 1, and HUVECs - lane 2. Total lysate of both cell types were subjected to SDS-PAGE and subsequent western blot analysis with ab10288. The antibody recognizes a protein of about 36 kDa in total lysate from LECs but not from HUVEC.



Immunocytochemistry/ Immunofluorescence - Mouse monoclonal [18H5] to Podoplanin - BSA and Azide free (ab10288)

Immunocytochemistry/Immunofluorescence analysis of human dermal lymphatic endothelial cells (HDLEC) labelling Podoplanin with ab10288. An Alexa Fluor<sup>®</sup> 488-conjugated goat anti-mouse was used as the secondary antibody. Nuclei counterstained with DAPI.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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